

ON SOME NEW GENERA AND SPECIES OF HYMENOPTERA (ICHNEUMONIDÆ, CHRYSIDIDÆ, FOSSORES, AND APIDÆ).

By P. CAMERON.

ICHNEUMONIDÆ.

AMBLYJOPPA, gen. nov.

Antennæ stout, slightly compressed and dilated between the middle and the apex. Scutellum roundly convex, raised above the level of the mesonotum; its sides not margined, the apex with a flat, oblique slope. The base of the median segment has a distinct oblique slope; the areola is somewhat horseshoe-shaped, slightly narrowed behind; it is flat, raised, smooth and shining; the sides, except at the apex, are furrowed, the furrows becoming wider and striated towards the apex; the posterior, median, and the spiracular areae only are clearly defined; there are no spines or projections, and the apex of the segment has a gradually rounded slope. Areolet narrowed at the top. Abdomen closely punctured; the segments are closely punctured and do not project much at the apex laterally. Legs stout; the apex of the hinder femora does not extend beyond the third segment. The post-petiole is wide and clearly separated; on the second segment only the part between the gastrocoeli is striated. The abdomen is comparatively short, being not much longer than the head and thorax united; its apex is bluntly pointed and broad; it is not quite half the length of the penultimate; the ovipositor is broad and projects.

The temples are obliquely and rather sharply narrowed; the occiput is roundly incised, and is sharply margined; the malar space is large; the apex of the clypeus is transverse; the labrum slightly projects; the second joint of the maxillary palpi is widely dilated; the mesopleural tubercles are long, narrow, and plate-like; the ventral keel extends on to the fourth segment, and is not very distinct. There is a short stump of a nervure on the cubital-disco nervure. The wings are dark-coloured.

The species I have included in this genus are large handsome insects. The characteristics of the genus are the roundly convex scutellum and the flat, raised, smooth and shining areola. The median segment is completely areolated; there are three basal and five apical areae, besides the spiracular area. The basal joints of the flagellum are elongated, more than three times longer than wide; the transverse median nervure is not quite interstitial; the transverse cubital nervures may be distinctly separated above, or they may be almost united.

To this genus belongs "*Ichneumon*" *ælvanus*, Cam.,\* which appears to be a common Indian species.

AMBLYJOPPA RUFO-BALTEATA, sp. nov.

Nigra, capite thoraceque flavo-maculatis; abdominis medio late

\* 'Manchester Memoirs,' xl. pt. 4, p. 8.

rufo, apice petioli flavo; pedibus nigris; tibiis tarsisque late flavis, tarsis nigro-maculato; alis fusco-violaceis, nervis stigmatæque nigris. ♀.

*Hab.* Khasia Hills (coll. Rothney).

Antennæ stout, slightly dilated and compressed before the middle; the tenth to fifteenth joints white below; the scape minutely punctured, thickly covered with white pubescence. Head black; the face, clypeus, labrum, except in the middle, the inner orbits, the outer on the lower half—narrowly above, broadly below, the yellow extending to the base of the mandibles—pale yellow. Face and clypeus punctured, thickly covered with short white hair; the front above closely punctured. Thorax black; the edge of the pronotum, two short lines shortly behind the middle of the mesonotum, the scutellum, post-scutellum, two somewhat triangular marks on the sides of the metanotum, extending on to the spiracular area, the tubercles, a large mark on the under side of the mesopleuræ—rounded in front, obliquely narrowed at the apex—pale yellow. Mesonotum opaque, distinctly punctured in the middle, less distinctly and more closely on the sides; and thickly covered with short fuscous pubescence. Scutellum roundly convex, punctured, and thickly covered with long pale hair; post-scutellum smooth, thickly covered with fuscous hair. Median segment rugosely punctured; the supræmedian area has the basal half narrowed; the base in the middle transverse and slightly more than half the width of the apex; inside it is not depressed, is smooth and shining; the apex with two rows of punctures, the basal row not reaching to the sides; the posterior median and posterior intermedian areae are stoutly transversely striated, the latter more strongly than the former. Pro- and mesopleuræ closely punctured, their apices more or less striated; metapleuræ closely rugosely punctured, above the middle keel more or less obliquely striated. The lower part of the stigma and the apical nervures are fuscous; the areolet five-angled, at the top half the width of the bottom; the recurrent nervure is received shortly behind the middle. Legs black; all the trochanters, the four anterior coxæ, the apices of the four anterior femora, the anterior tibiæ in front and at the base behind, the basal part of the intermediate to shortly beyond the middle and the basal two-thirds of the hinder pair, and an irregular mark on the top and sides of the hinder femora—broad above, narrow on the sides—pale yellow; tarsi pale yellow, the basal three joints at the apex and the apical two entirely black. Abdomen black; the apex of the petiole yellow; the second and third segments entirely, and the base and sides of the third, ferruginous. The petiole is depressed in the centre above, the base irregularly roughened; the apex rugosely punctured; the base of the post-petiole rugosely punctured; the apex less strongly punctured; the sides are closely, strongly, obliquely striated; the second, third, and fourth segments are closely punctured; the second closely, longitudinally striated at the base; the gastrocœli on their inner sides with curved striæ.

#### ACANTHOJOPPA, gen. nov.

Antennæ dilated and compressed beyond the middle. Scutellum pyramidal, the base with an oblique slope; the top roundly depressed; the sides of the top leaf-like; the apex has a more abrupt slope, is

shorter, and has its sides keeled. Median segment completely areolated; the base in the middle is depressed; there are five basal areæ and three apical ones; the areola is completely defined; its base transverse; its sides oblique; the sides at the apex are oblique; the apex rounded inwardly. The spines are long and stout; the basal depression is keeled laterally. Face flat, hardly projecting in the centre; the labrum projecting. Occiput widely incised. Temples broad, obliquely narrowed. Areolet five-angled, narrowed at the top; the cubito-disco nervure has an almost obsolete stump of a nervure. Wings hyaline, or slightly infuscated at the apex. Legs long; the apex of the hinder femora reaches to the fourth segment. Petiole long and slender; the post-petiole becomes gradually wider from the base to the apex; the second and third segments are closely aciculated; the others smooth; the apical three segments become gradually narrowed; the last is largely developed; the cerci are prominent; the ovipositor largely projects; the ventral keel is large, and extends to the apex of the fifth segment.

The species of this genus known to me are uniformly ferruginous, with the wings hyaline, or yellowish-hyaline, at the most only slightly smoky at the apex; the antennæ are similarly coloured, darker towards the apex and lighter in the middle. The median segment is more regularly and completely areolated than usual; the sides of the abdominal segments do not project laterally. In the male the antennæ are not distinctly serrate.

A distinct genus, easily known by the flat face, the completely areolated median segment, with its stout spines; the pyramidal scutellum, deeply depressed on the top; and the abdomen narrowed at the apex, and with a long projecting ovipositor. In the arrangement of Kriechbaumer and Ashmead, the genus would come in near *Cryptojoppa*.

#### ACANTHOJOPPA SCHIZOASPIS, sp. nov.

Ferruginea, facie, clypeo, pleurisque flavis; antennis ferrugineis, apice late nigris; alis fulvo-fumatis, stigmatè ferrugineo. ♀.

Long. 15-16 mm.

*Hab.* Khasia (coll. Rothney).

Antennæ rufo-fulvous, beyond the sixteenth joint black; the scape punctured, thickly covered with short black hair; the flagellum with a pale down. Head rufo-fulvous; the face and clypeus with a paler yellow tinge; closely and rather strongly punctured; the apex of the clypeus impunctate in the middle; the labrum closely punctured; thickly covered with long fulvous hair. The apex of the mandibles broadly black. Front very smooth and shining; the vertex shagreened; the orbits yellow. The mesonotum dark rufous; closely punctured, thickly covered with short black hair. Scutellum large, pyramidal; the base with an oblique slope; the apex almost perpendicular; the top roundly and deeply depressed; the sides somewhat triangular, rounded; margined; the basal keels large, curved, acute; the basal depression narrow, transverse, not very deep; the hair thick, long, blackish. Post-scutellum yellowish, with an obliquely rounded slope;

the centre closely and finely striated; the sides with a few stout striations; the depressions at its sides wide, shallow, and marked with stout keels; the base of the median segment in the centre has a rounded slope, deeply depressed in the middle, and bordered with a stout keel round the sides and apex; the apex is rugose. The supra-median area is slightly wider than long; the base almost transverse; the sides at the base oblique; at the apex more sharply oblique; the apex bulges roundly inwardly; the posterior median area is of almost equal width throughout; the teeth are large, broad; the base of the segment is strongly punctured; the supramedian area has a few oblique striations; the apex strongly transversely striated. The upper part of the propleuræ is strongly punctured; the centre at the base with a few fine oblique striations; the lower part at the middle and apex with stout, irregular, mostly curved, keels. Mesopleuræ strongly punctured; the middle with some stout longitudinal striations; the tubercles large, elongate, leaf-like, roundly narrowed at the base and apex. The base of the metapleuræ above finely, the rest coarsely, punctured, the punctures running into reticulations; in front of the hinder coxæ are some stout oblique striations, and in front of these is a stout curved keel. Mesosternum thickly covered with fuscous hair, punctured; the furrows deep, much widened at the apex. Legs stout; the four anterior coxæ and trochanters more or less yellowish; the hinder strongly punctured; the hinder tarsi spinose. The costa and stigma are luteous; the nervures darker; the areolet narrowed at the top, the transverse cubital nervures almost uniting there; the first is largely bullated at the top; the second in the centre; the recurrent nervure is received in the centre of the areolet; the transverse median nervure is received distinctly in front of the transverse median. Petiole yellowish at the base, the apex shagreened; the sides at the apex with some large deep punctures. The other segments are closely punctured; blackish down the middle; the gastrocœli shallow, closely punctured; the space between them striated. The sheaths of the ovipositor fulvous, densely haired; the apex black.

(To be continued.)

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## SOUTH AFRICAN COCCIDÆ.—II.

By T. D. A. COCKERELL.

### *Aspidiotus (Marganella) maskelli*, Ckll.

Botanical Gardens, Durban, Natal; on twigs of *Camellia* (*Fuller*). New to the African continent; it has been found in Mauritius by De Charmoy.

### *Hemichionaspis cyanogena*, Ckll.

Verulam, Natal (*Fuller*). Botanical Gardens, Durban, Natal; on *Alternaria* (*Fuller*). The last-mentioned material showed circumgenital glands as follows: median, 17; cephalolateral, 16; caudolateral, 13. The type had median, 11; cephalolateral, 17; caudolateral, 15.